

Name: _____ Period: _____ Date: _____ of 35pts

Probability Take Home Test (Show all your work: Do not just write the answers!)

1a. Find the probability of getting at least one tails in the experiment of flipping two coins. 5 pts

Coin 1	H	T	T	T	T	T	T	H	T	T	H	T
Coin 2	H	H	H	T	T	H	T	H	T	H	T	H

1b. What will happen if an additional flip resulted with "H H"? How would the answer change: it will increase or it will decrease , circle & explain?

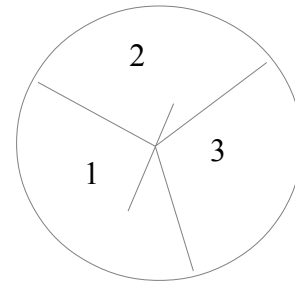
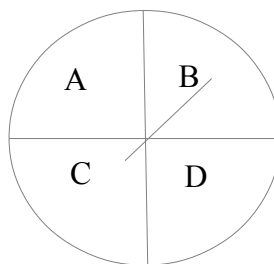
2a. Create the Sample Space for flipping a coin and rolling a die at the same time. 3pts

Sample Space	1	2	3	4	5	6
H						
T						

2b. Are the two events above Independent or Dependent? Explain _____

3. Use the sample space to answer the following questions: 5pts

Sample Space	1	2	3
A	A1	A2	A3
B	B1	B2	B3
C	C1	C2	C3
D	D1	D2	D3

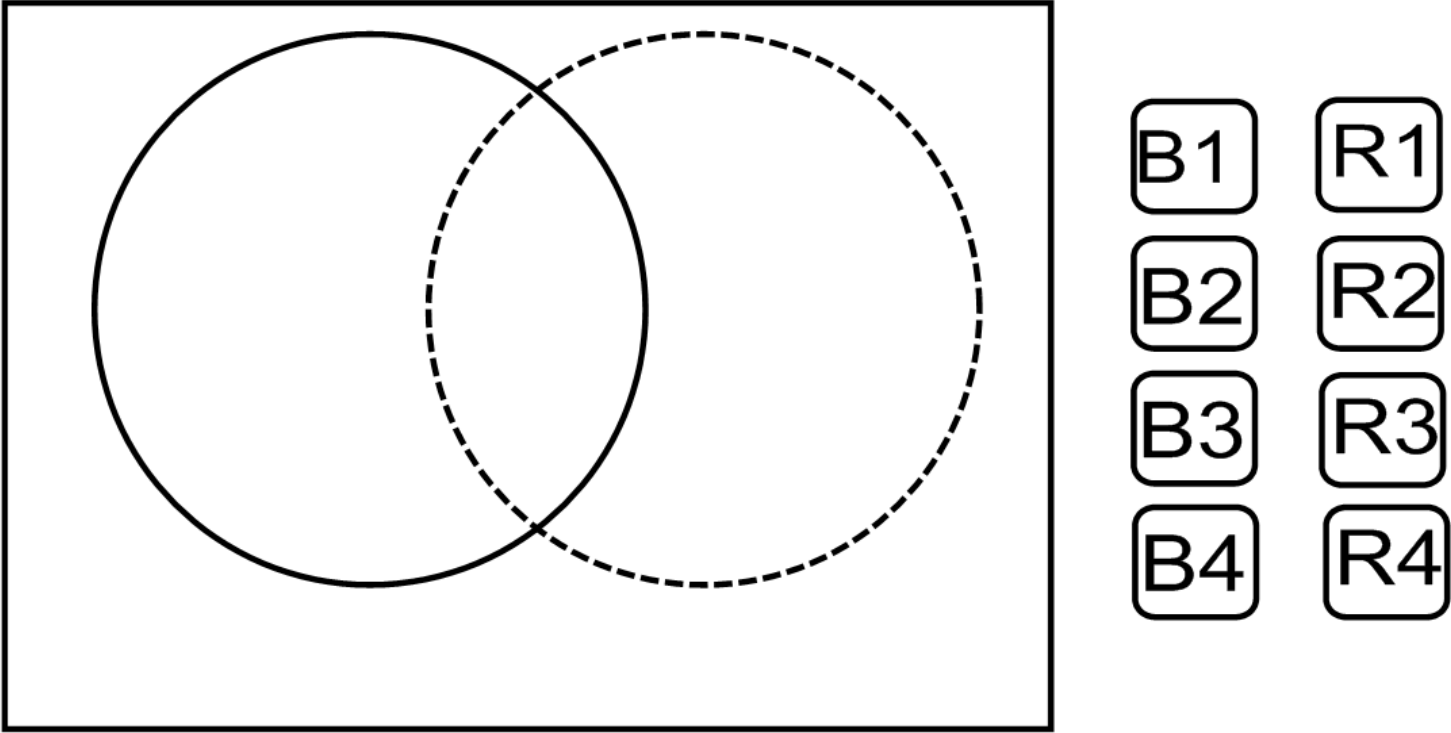


a. What is the probability of spinning a letter C on the first wheel and a 1 on the second?

b. Is there another way to find this probability? Explain the reason why or why not? _____

c. What is P(Even # and letter A)? _____

4a. A bag contains eight tiles 4-blue & 4-red numbered one to four. Fill in the venn diagram to show the probability of selecting one tile that is blue or an odd number. 7pts



4b. What is the P(Blue or Odd Number)? Ans:_____

Explain the reasoning for your answer._____

4c. True or False: In a disjoint event the circles in the Venn Diagram do not touch.

4d. True or False: The intersection is the overlap region in the Venn Diagram.

5a. What is the P(1 or 4)? _____ 2pts

5b. What is the P(Blue or Red)?_____ 2pts

6. How many total possible outcomes are their for selecting the tiles?_____ 1pt

Name: _____ Probability Test (Page 3 of 3)

7a. Create a tree diagram for a lunch menu. (Abbreviate after the first full branch) 5pts

Option 1: Soda, Water or Juice

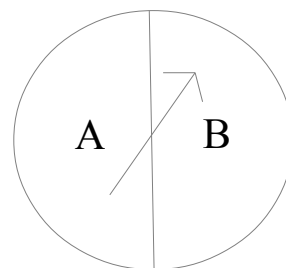
Option 2: Hoagie or Steak

Option 3: Chips or Pretzels

7b. How many different choices are there? _____

7c. If soup was added to option 2, how many more choices would there be? _____

8. Spinning the wheel twice, what is the probability of getting spinning at least one A? Show all your work! 5pts



Bonus.

Explain the difference between Experimental and Theoretical Probabilities (Use an example event in your explanation for the most points.)

Bonus points will be award to the most accurate and creative explanation.

5 points -Best

3 points -Good

1 point -Basic Definition